Fire Program Analysis – Preparedness Module

Threat Fires

Date: May 6, 2005

Topic: Threat Fires included within the Fire Event Scenario for Initial Response Analysis.

Issue: Historically fires have occurred outside the boundary of the Fire Planning Units Fire Management Units and are not the primary fire protection responsibility of the Fire Planning Unit participants. How should this set of fires be included in the analysis of the Fire Planning Unit workload?

Background: Several Fire Planning Units have requested the ability to include "threat fires" in their historical data set or fire occurrence records for the participating members of a Fire Planning Unit. The FPA Steering Committee made the decision to allow "threat fire" within the historical fire record for a FPU, this business rule will be used in the analysis to assist in budget development for fiscal years 2007 and 2008.

Analysis of the national data bases (Figure 1) of the five federal agencies indicates that "threat fires" represent a workload of approximately nine percent. While not insignificant this workload may not have a major effect upon the outputs of the analysis.

Agency	Years of Data	Fires Suppressed by Agency on Agency Lands	Threat Fires As Per Agency Direction	% Threat Fires
USFS	99-03	10,269	722	6.6%
BIA	93-02	4,148	227	5.2%
FWS	93-03	1,755	635	23.9%
BLM	94-03	35,461	3,277	9.0%
NPS	93-03	8870	708	7.9
Total		60,503	5,569	9.2%

Definitions and Business Rules: Threat fires have been defined by the National Wildfire Coordinating Group as "any uncontrolled fire near to or heading toward an area under organized fire protection.

For use within FPA the following business rules will apply for including threat fires within a FPU:

- No fire should be counted by more than one agency.

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- Fires can only be counted if they occur within the boundary of a Fire Planning Unit (FPU) in which the agency's operational unit is participating in the analysis.

- Inclusion of threat fires in an analysis requires the creation of one or more threat fire FMU's. Only those historic fires that clearly threaten FPU participants lands or lands for which they have protection responsibility would be included.

- *Threat Fire* Fire Management Unit can not overlap another Fire Management Unit

- *Threat Fire* Fire Management Units shall not exceed one mile in distance from any FPU's Fire Management Unit or Units that it borders, creating a "threat zone" (the boundary area containing the threat fires).

- The "threat fire" will be part of the statistical fire draw for the FMU in which it occurred.

Logical factors associated with identifying a "threat fire" will include: its physical proximity to lands within a Fire Management Unit and associated Fire Planning Unit, its fire behavior potential, and the ability of the responsible protection agency to make a timely response to that general location. If "threat fires" are to be included in the analysis this workload should be described in the respective agencies Fire Management Plans.

Developing the *Threat Fire FMU*: FPU's need to consider what is potentially threatened. The *Threat Fire* FMU (that boundary area containing the threat fires) can be subdivided into several FMUs to reflect what is being threatened. Keep the attributes tied to physical properties of the threatened FMU.
Example: High value timber is on your land, but the threat land doesn't have timber. One attribute would address protecting the high value land from threat fires;

Purpose is not to protect the (*Threat Fire*) FMU that the fire breaks out on, but the FMU where the fire will spread to.

Developing Weights:

To properly weight the *Threat Fire* FMU take the "zone", divide it into separate *Threat Fire* FMU's. The adjacency to other FMUs should drive the division of the "zone" into *Threat Fire* FMU's. Use the weight assigned to adjacent (threatened) FMU's as entered into FPA-PM by sensitivity period and fire intensity level. Do not use the attributes for the adjacent, threatened FMU with the acres for each attribute as they occur within the *Threat Fire* FMU, this will result in a different weight than that of the FMU being threatened. Simply replicate the weights as you defined them in FPA-PM for the FMU that is being threatened.

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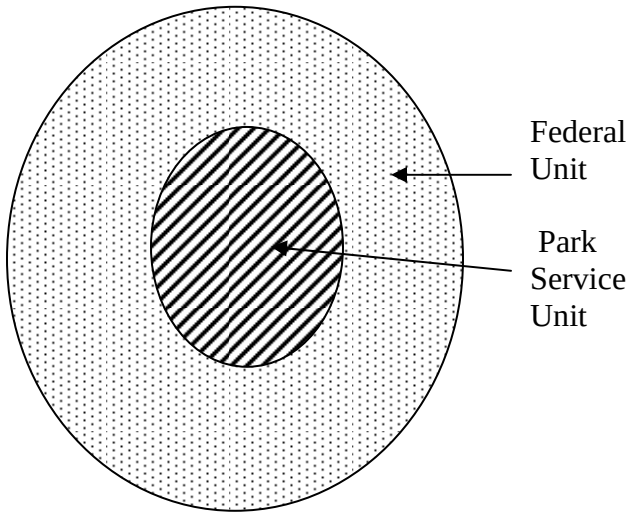
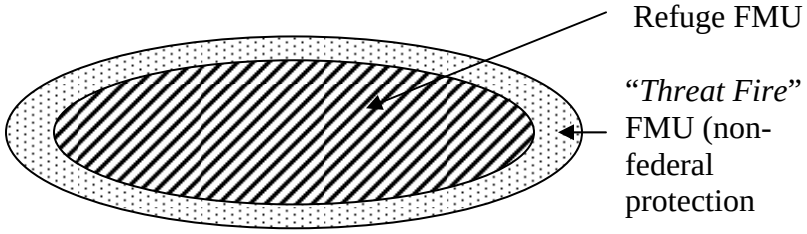
Examples:

1. A National Park Service unit is surrounded by other Federal lands in designated FMUs. There should be no "*Threat Fire*" FMU developed as the surrounding lands are already covered. The actual land owner should be submitting the "counting" fire report.



2. A Fish and Wildlife Service unit is surrounded by private lands under non-federal protection. A "*Threat Fire*" FMU can be developed and should be kept as narrow as possible. Weighting of *the Threat Fire* FMU would relate to the weight of the FMU containing the FWS unit.



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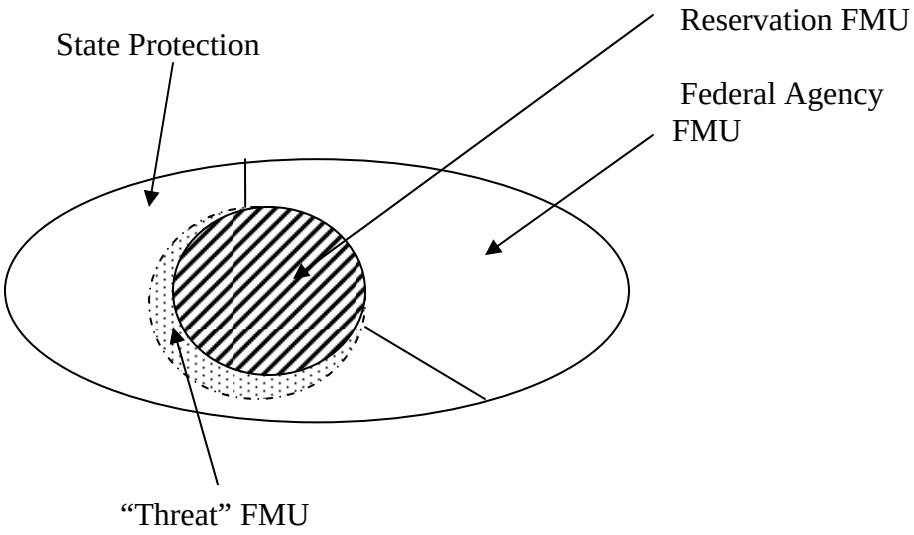
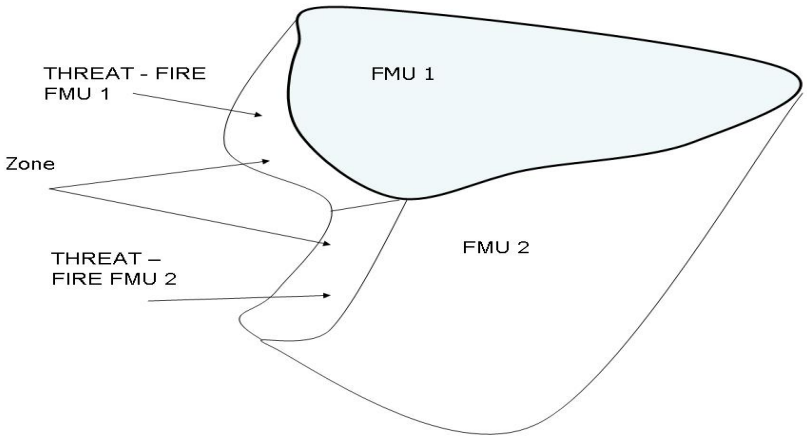
3. A Bureau of Indian Affairs unit is surrounded partly by other Federal lands and partly by lands protected by non-federal entities not participating in FPA-PM. The portion protected by the non-federal entity can be formed into a *Threat Fire* FMU. The portion in other Federal ownership is expected to be in a FMU and would not be included in the *Threat Fire* FMU.



4. FMU's 1 and 2 are in a Fire Planning Unit, lands to the west or left of the FPU are not within a FPU and the agency with fire protection responsibility for the wildlands is not participating in any FPA analysis. The adjacency to other FMUs should drive the division of the "zone" into *Threat Fire* FMU's. Developing weights for the *Threat Fire* FMU's will use the weight assigned to adjacent (threatened) FMU's as entered into FPA-PM by sensitivity period and fire intensity level. The *Threat Fire* FMU's are now within the FPU meaning the FPU boundary is now changed.



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